

Postsecondary Feedback Report Technical Notes

The Postsecondary Feedback Report (PSFR) is produced by the Kentucky Center for Statistics (KYSTATS) utilizing data from the Kentucky Longitudinal Data System (KLDS). Data sources leveraged for this report include data from the Council on Postsecondary Education and Unemployment Insurance. This report looks at multiple academic years (AY) and is divided into two main dashboards: (1) *Employment Outcomes* and (2) *Completion and Transfers*.

Occasionally, data from one source will not conform to data from another source because of differences in cohorts, how variables are defined, the treatment of missing data, and other factors. This means that data published in this report may not be comparable to data published in other reports. For specific details about metric formulas please refer to Appendix A. Some values are redacted to preserve individual privacy and conform to state laws. Redaction rules can be found in Appendix B.

The PSFR allows the filtering of individual reports by postsecondary institution. Institutions include all 4-Year Private (Independent), 2-Year Public (KCTCS), 4-Year Public Comprehensive, and 4-Year Public Research. Proprietary institutions are not included in this report due to a lack of data. Sectors used are those identified for each institution in 2017 by the Council on Postsecondary Education. The breakdown can be seen below:

- **4-Year Private (Independent)**

AIKCU (Association of Independent Kentucky Colleges and Universities)

This education sector includes all Kentucky 4-Year Independent Institutions: Alice Lloyd College, Asbury University, Bellarmine University, Berea College, Brescia University, Campbellsville University, Centre College, Georgetown College, Kentucky Christian University, Kentucky Wesleyan College, Lindsey Wilson College, Midway University, University of Pikeville, Spalding University, St Catherine, Thomas More College, Transylvania University, Union College, and University of the Cumberlands.

- **2-Year Public KCTCS (Kentucky Community and Technical College System)**

This education sector includes all Kentucky 2-Year Public Institutions: Ashland Community & Technical College, Big Sandy Community & Technical College, Bluegrass Community & Technical College, Elizabethtown Community & Technical College, Gateway Community & Technical College, Hazard Community & Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community & Technical College, Maysville Community & Technical College, Madisonville Community College, Owensboro Community & Technical College, Somerset Community College, Southeast Kentucky Community & Technical College, and West Kentucky Community & Technical College.

- **4-Year Public Comprehensive**

This education sector includes all Kentucky 4-Year Public Comprehensive Institutions: Eastern Kentucky University, Kentucky State University, Morehead State University, Murray State University, Northern Kentucky University, and Western Kentucky University.

- **4-Year Public Research**

This education sector includes all Kentucky 4-Year Public Research Institutions: University of Kentucky and University of Louisville.

Majors are grouped into eight distinct categories by Classification of Instructional Programs (CIP) Codes. Majors are represented by the symbols below and are used throughout the report. For a full list of 2-digit CIP Codes within these groups, see Appendix D.

Figure 1: The classification of majors into Major Groups. From left to right: Arts and Humanities, Business, Education, Health, Social and Behavioral Sciences, STEM, Trades, and All Groups.



Information (info) icons can be found throughout the report beside section titles. Hovering over these icons provides general information about a chart. For more detailed calculations/explanations of the metrics, see Appendix D. The icon can be found below:

Figure 2: The info icons are displayed as blue circles encompassing a lowercase ‘i’.



Figure 3: The guide icon will overlay brief instructions about the dashboard. Clicking the guide icon again will close the guide.





Postsecondary Feedback Report



Enrollment &
Employment Outcomes

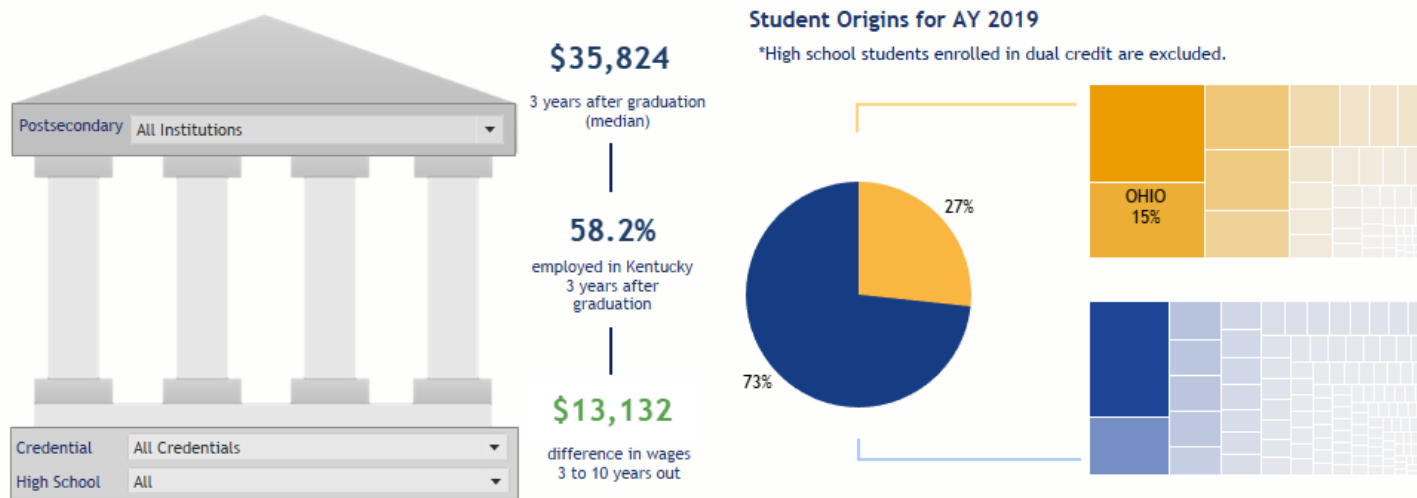
Completion &
Transfer Outcomes

Technical Notes

Overview

The Postsecondary Feedback Report (PSFR) is a dynamic tool that allows users to explore the connection between employment outcomes associated with graduates of different majors and credential levels at Kentucky postsecondary institutions. This report details 42 of Kentucky's public (4 year and 2 year) and private (4 year) institutions. Hovering over an info button will give more details about a chart. Filtering is done by selecting an institution and/or credential level on the left, or clicking a major icon below.

Last updated on March 3, 2020

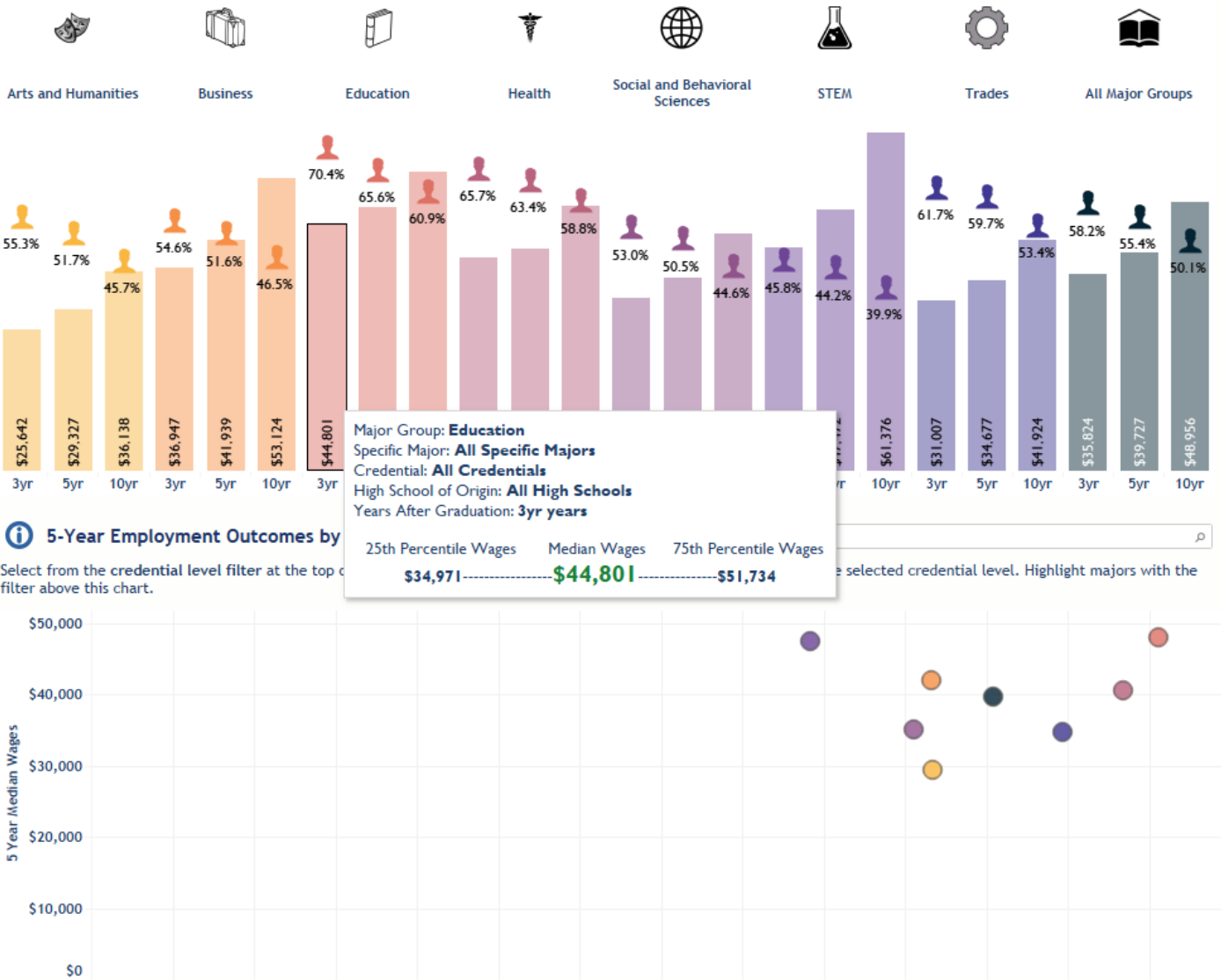


The Enrollment & Employment Outcomes dashboard gives outcomes at a glance to the left, and is then split into sections. The outcomes at a glance show the median wages three years after graduation, percent employed in Kentucky three years after graduation, and the difference in median wages three to ten years after graduation. There are also three selectable dropdowns on the institution picture, which filter the dashboard by Postsecondary institution or sector, credential (All Credentials, Certificate, Diploma, Associate, Bachelor, Master, or Doctoral), and High School.

The first section, *Overview*, gives a quick summary of the report as well as a link to aggregated tables by institution. The second section, *Student Origins for AY 2019*, provides a single year snapshot of the number of undergraduates and graduates enrolled by institution during AY 2019. The pie chart gives a quick glance at the proportion of in-state versus out-of-state students. In-State students were attributed to their high school county whereas Out-of-State students were attributed to their respective state. This breakdown can be seen in the tree charts beside the pie chart. High school students in dual enrollment courses are excluded.



Longitudinal Employment Outcomes for Graduates



This third section, *Longitudinal Employment Outcomes for Graduates*, displays employment rates and median wages at different time points (post-graduation) for both undergraduate and graduate students. All credential earners from AY 2007 to AY 2015 are included in this report. Students were excluded from employment and wage calculations if they were re-enrolled in a Kentucky postsecondary institution during the corresponding Federal Fiscal Year (FFY). Each graduate is assigned a year of graduation based on the highest credential earned in this timeframe. Year of graduation is used to calculate employment and wages. These outcomes are three, five, and ten years after graduation. Clicking on a major icon will filter employment outcomes in the below chart and highlight the current chart.

- Employment Percentage:** The percentage employed and average wages, 3-years, 5-years, and 10-years post-graduation are dependent on when the highest credential was earned for those not re-enrolled in postsecondary during the given wage year (see Appendix E for calculations based on AY of highest credential earned). Employment outcomes were produced on a rolling scale. In other words, multiple cohorts of years were grouped into each yearly outcome. For instance, 3-year outcomes start with graduates in AY 2008 and look at FFY 2011 wages and

include AY 2009 graduates with FFY 2012 wages, AY 2010 graduates with FFY 2013 wages, AY 2011 graduates with FFY 2014 wages, AY 2012 graduates with FFY 2015 wages, AY 2013 graduates with FFY 2016 wages, and AY 2013 graduates with FFY 2017 wages.

- b. **Wages:** Wages were calculated by summing the wages for applicable individuals and calculating a median wage for each group. Wage data include individuals employed by firms covered under Kentucky's UI system. Those employed out-of-state are not included. Those enrolled in a postsecondary institution are also excluded. The same method for creating cohorts as explained in section a, above, was used for wages as well. For a detailed explanation of academic years included in each cohort (e.g. 3-Year, 5-Year, 10-Year Wages), see Appendix E. Also, 25th, 50th, and 75th percentiles for wages are provided in the hover.

The next section, *5-Year Employment Outcomes by Major* plots the percent employed in Kentucky by the median wages (five years after graduation, excluding students reenrolled at this time point). Clicking a major icon above will filter to specific majors within the selected group. The filter in the title allows one to select majors at specific credential levels and can also be highlighted with the filter above the chart.

Employment data are limited to workers employed by firms covered by the Kentucky Unemployment Insurance (UI) System and outcomes are only for those employed in Kentucky. Those credential earners employed out-of-state are not included. Some values are redacted to preserve individual privacy.



Postsecondary Feedback Report

Enrollment &
Employment Outcomes

Completion &
Transfer Outcomes

Technical Notes

Degree Completion for Graduates Pursuing Additional Degrees



Select an Institution
(All)



There were 2776 Associate degree earners in academic year 2012 that pursued a Bachelor degree in academic year 2013. The stacked bars to the right show the progress of degree completion between 2013 and 2018. By 2018, 2042 of those students had earned a Bachelor degree or higher.



Hover to see in which universities Associate degree earners enrolled to pursue Bachelor degrees.



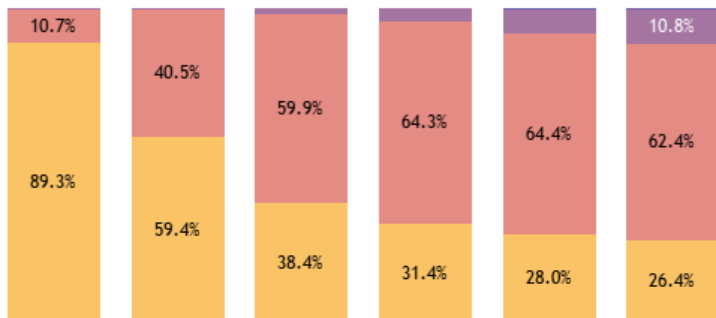
There were 2922 Bachelor degree earners in academic year 2012 that pursued a graduate degree in academic year 2013. The stacked bars to the right show the progress of degree completion between 2013 and 2018. By 2018, 2421 of those students had earned a Masters or Doctoral degree.



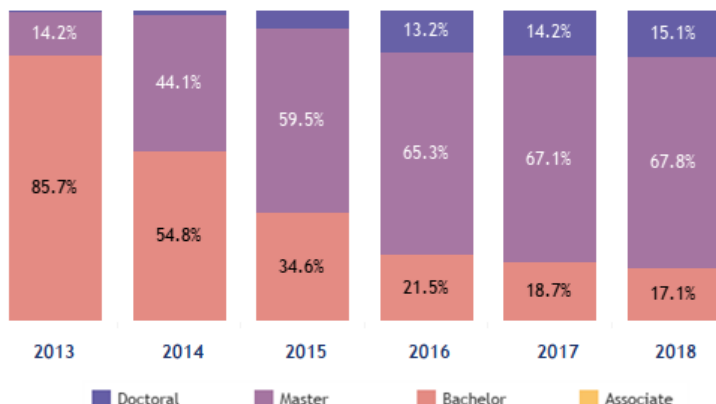
Hover to see in which universities Bachelor degree earners enrolled to pursue Graduate degrees.



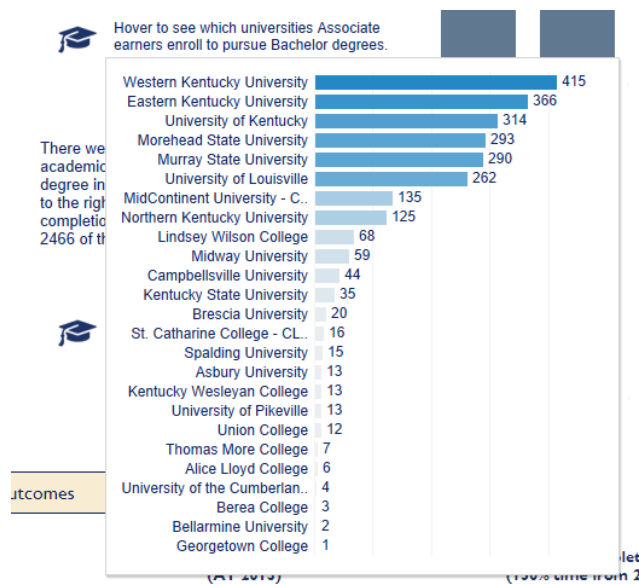
Associate Earners Pursuing a Bachelor Degree



Bachelor Earners Pursuing a Graduate Degree



The first section on this dashboard, *Degree Completion for Graduates Pursuing Additional Degrees*, provides an overview of graduates, either associate or bachelor's degree earners in AY 2012 who re-enroll to pursue additional education in AY 2013, and their degree progress over the next six years. This dashboard can be filtered by institution and major group. A brief description can be found to the left of the charts. Hovering over a graduation cap will show the institutions of enrollment for graduates pursuing additional degrees. An example can be seen below:



Transfer Student Outcomes (Statewide)

Original Institution

Institution of students that first enrolled in the fall of 2011 or 2012 but would transfer within two years.

Transfer Institution

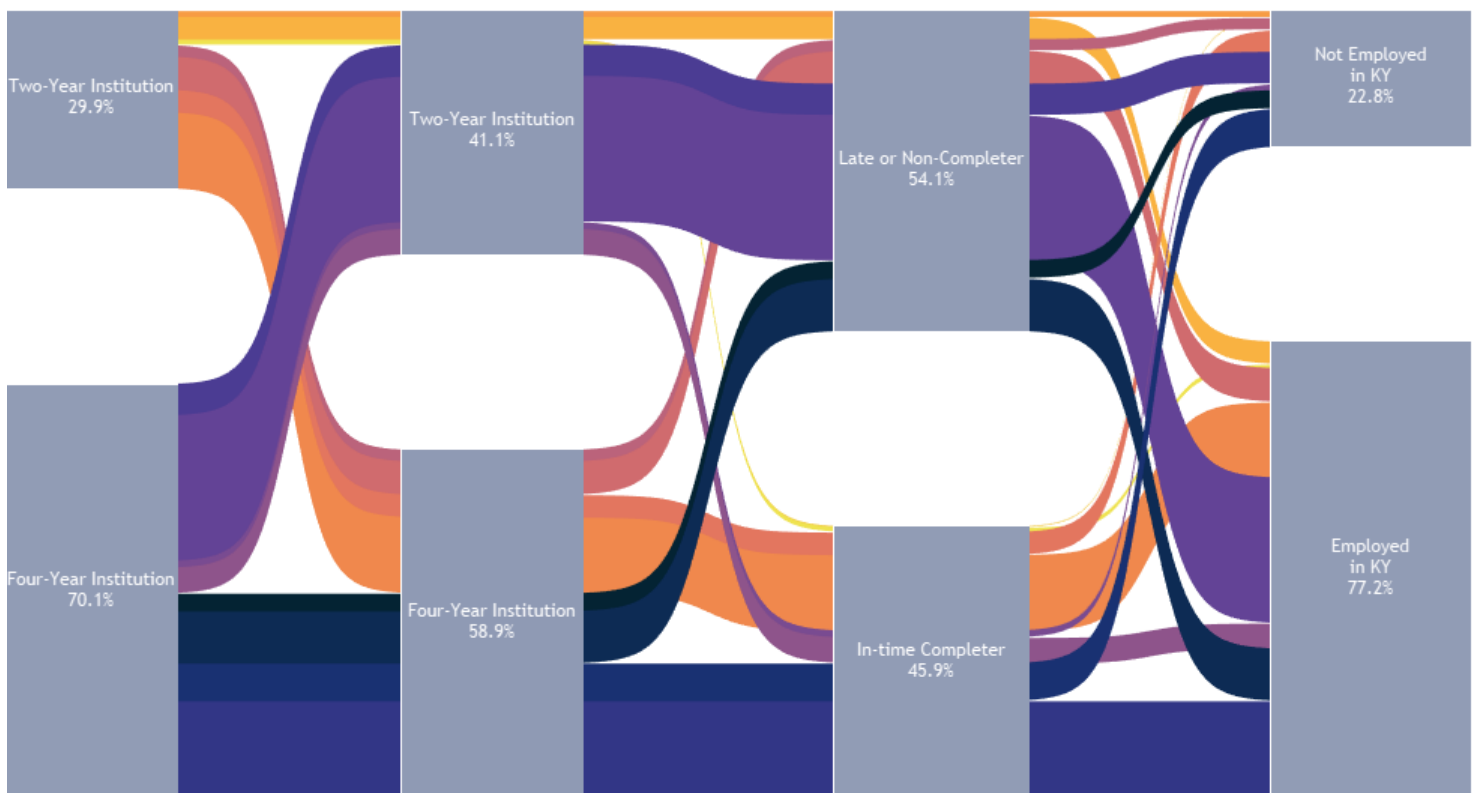
The institution students transferred to within two years of initial enrollment.

College Completion

6 years for Bachelor transfers and 3 years for Associate transfers.

Employment

The percent of transfers employed in Kentucky seven years after initial enrollment.



The next section, *Transfer Student Outcomes (Statewide)*, provides college completion and employment outcomes for transfer students. The cohort is comprised of first-time freshman students enrolling in the fall of AY 2011 or 2012 (initial enrollment) who transferred to another Kentucky institution within two years of first enrollment. Students are grouped by the type of institution in which they first enrolled (2-Year or 4-Year

Private/Public). Then, there is a flow to the type of institution to which they transferred. The flow continues to college completion outcomes, which are calculated based on the type of degree attained by the student as follows:

- If the student acquired an Associate degree as the highest degree, the student was given 3 years from initial enrollment to complete the degree. If the individual completed an Associate outside of this timeframe, the individual is labelled as a non-completer indicating completion did not occur in 150% of expected time.
- If the student acquired a Bachelor's degree as the highest degree, the student was given 6 years from initial enrollment to complete a bachelor degree. If the individual completed a Bachelor's outside of this timeframe, the individual is labelled as a non-completer indicating completion did not occur in 150% of expected time.
- If the student did not acquire a degree in this time-frame, the student was labelled as a non-completer.

The flow finishes by going from completers/non-completers to Kentucky employment seven years from initial enrollment.

Method of Defining Transfers' Primary Institutions

Primary institutions at any given time point were defined as the institution in which a student had the most enrolled credit hours. For instance, if a student was enrolled for five credit hours at Institution A and three credit hours at Institution B, their primary institution would be Institution A. This was done for each potential transfer point in time. If there was a tie in credit hours during initial enrollment, the student was considered 'co-enrolled' and removed from the analysis on transfer students (which affected <1% of all students). For transfer students, the primary institution from the initial enrollment semester would be considered the 'Original Institution' and the primary institution from the fall semester two years post-initial enrollment would be considered the 'Transfer Institution'. For instance, a student who initially enrolled in Fall of AY 2010 would have the primary institution during this semester labelled as the Original Institution. The primary institution during Fall of AY 2012 would be the 'Transfer Institution' (presuming the primary institution shifted between these two time points).

APPENDIX A: METRIC FORMULAS

Data Sources:

Council on Postsecondary Education (CPE): Provides data from the Kentucky Postsecondary Education Data System (KPEDS). This system contains comprehensive information on postsecondary enrollments, coursework, grades, and degrees earned for all in-state postsecondary students that attend one of the following institution types: 4-Year Private (Independent), 2-Year Public (KCTCS), 4-Year Public Comprehensive, and 4-Year Public Research. In-state proprietary and out-of-state institutions are not included in this data system.

Unemployment Insurance (UI): This system contains information on all wages and employment covered by the Kentucky Unemployment Insurance System. This is estimated to cover 90% of employment in Kentucky. Annualized wages are based on the Federal Fiscal Year (FFY), which runs from October 1st through September 30th. For instance, the 2018 FFY encompasses the time period of October 1, 2017 through September 30, 2018.

Data Elements: All data elements needed to construct a metric are provided with the data table name first followed by the elements pulled from that particular table.

Enrollment & Employment Outcomes - Overview:

Median¹ Wages three/five/ten years after graduation – Graduation year is determined through CPE degree information, with each individual assigned the highest acquired credential, and affiliated degree year, during the given timeframe. Total individual wage is determined by summing all in-state UI covered wages acquired by an individual during the appropriate FFY. Individual wages are used to calculate median wages by credential level, institution, and major. Any individuals re-enrolled in an in-state postsecondary institution, as determined by CPE data, during the appropriate FFY are excluded.

Data Source: CPE, UI

Data Elements: UI_Wages_Annualized: FFY, sumWages; KPEDS_Degree: degreeerank, KPEDS_Degree_Year, KPEDS_Institution, KPEDS_CIP_2Digits.

Percent Employed in KY three/five/ten years after graduation – Graduation is determined as described in median wages above. Individuals are considered employed if they acquire any in-state UI covered wages during the requisite FFY. As with median wages, individuals re-enrolled in an in-state postsecondary institution covered in the CPE data system are excluded: re-enrolled individuals are excluded from both the base graduation rate and the employed rate.

Data Source: CPE, UI

Data Elements: UI_Wages_Annualized: FFY, sumWages; KPEDS_Degree: degreeerank, KPEDS_Degree_Year, KPEDS_Institution, KPEDS_CIP_2Digits.

Difference in median wages three to ten years after graduation – Median wage differences are based on median wages as calculated above. As such, the three and ten-year wage calculations may be based on different individuals.

Data Source: CPE, UI

Data Elements: UI_Wages_Annualized: FFY, sumWages; KPEDS_Degree: degreeerank, KPEDS_Degree_Year, KPEDS_Institution, KPEDS_CIP_2Digits.

¹ Medians (and percentiles) are selected rather than means to account for the traditional positive skew found in wages. This skew is evidenced when viewing wage percentiles in the '5 Year Median Wages by Major'.

Employment Outcomes – Student Origins from the 2019 Academic Year

Institution enrollment: This section includes all non-high school enrollments in CPE-covered postsecondary institutions during the 2019 AY. Specifically, individuals are excluded if they are classified as ‘High School’, ‘House Staff’, ‘WKU Academy’ or ‘Auditor’.

In-State: When CPE enrollment data lists state of origin as Kentucky, an individual is classified as in-state and further broken down by county of origin in the tree chart.

Out-of-State: When CPE enrollment data lists state of origin as anything other than Kentucky, an individual is classified as out-of-state and further broken down by either state of origin, in the case of contiguous states, or ‘other area’, in the case of a non-contiguous state of origin.

Data Source: CPE

Data Elements: KPEDS_Enrollments: *KPEDS_Institution, KPEDS_Classification (not in ('High School','WKU Academy','Auditor','House Staff')), KPEDS_StateCountryofOrigin, KPEDS_CountyofOrigin*

Longitudinal Employment Outcomes for Graduates

Uses the same median wage and employment rate calculation as in the section Employment Outcomes Overview.

Employment Outcomes – 5-year median wages by Major

Uses the same median wage calculation as in the section Employment Outcomes – Overview and calculates 25th, 50th and 75th percentiles. This section can be filtered by credential level and institution through use of the dropdowns at the top. Additionally, wages can be filtered by Major Group through use of the major icons under ‘Longitudinal Employment Outcomes for Graduates’.

Data Source: CPE, UI

Data Elements: UI_Wages_Annualized: *FFY, sumWages*; KPEDS_Degree: *degreeerank, KPEDS_Degree_Year, KPEDS_Institution, KPEDS_CIP_2Digits*.

Employment Outcomes – 5-year Employment Outcomes by Major

Uses the same median wage and employment rate calculation as in the section Employment Outcomes – Overview. This section adds the ability to dive deeper into wages and percentage employment by Specific Major.

Data Source: CPE, UI

Data Elements: UI_Wages_Annualized: *FFY, sumWages*; KPEDS_Degree: *degreeerank, KPEDS_Degree_Year, KPEDS_Institution, KPEDS_CIP_2Digits*.

Completion & Transfer Outcomes – Degree Completion for Graduates Pursuing Additional Degrees

Associate and Bachelor degree earners – Degree acquisition uses data from CPE’s KPEDS system to establish a cohort of individuals who completed a degree type of Associate or Bachelor in the 2012 AY. Additionally, cohorts include only those individuals who re-enrolled in a KY postsecondary institution² during the subsequent AY to pursue an applicable degree. Applicable degrees are as follows:

If an individual was identified as completing an Associate degree in 2012, the individual must have indicated pursuit of a Bachelor’s degree during enrollment in the 2013 AY.

If an individual was identified as completing a Bachelor’s degree in 2012, the individual had to indicate pursuit of a Master’s degree or higher during enrollment in the 2013 AY.

Data Source: CPE

² Only KY postsecondary institutions covered in the CPE system, as noted on page 1, are included.

Data Elements: KPEDS_Enrollments: *KPEDS_Institution, KPEDS_Classification, KPEDS_term, KPEDS_CreditBearingHours, KPEDS_Degree: degreeerank, KPEDS_Degree_Year, KPEDS_Institution,*

Re-enrollment to pursue additional education – When an individual re-enrolls in a single institution during the 2013 AY seeking a degree that meets prior specifications, that institution is labelled as the primary institution (visible when hovering over the graduation cap). When multiple institutions meet this criteria for the 2013 AY, the institution with the greatest number of total enrolled hours during the 2013 AY is classified as the primary institution.

Data Source: CPE

Data Elements: KPEDS_Enrollments: *KPEDS_Institution, KPEDS_Classification, KPEDS_term, KPEDS_CreditBearingHours, KPEDS_Degree: degreeerank, KPEDS_Degree_Year, KPEDS_Institution,*

Degree progress over the next six years– For each individual who met cohort inclusion requirements, progress was assessed annually from 2013 to 2018 to determine highest degree acquired by the specified AY.

Data Source: CPE

Data Elements: KPEDS_Enrollments: *KPEDS_Institution, KPEDS_Classification, KPEDS_term, KPEDS_CreditBearingHours, KPEDS_Degree: degreeerank, KPEDS_Degree_Year, KPEDS_Institution,*

APPENDIX B: REDACTION RULES

Redaction Rules

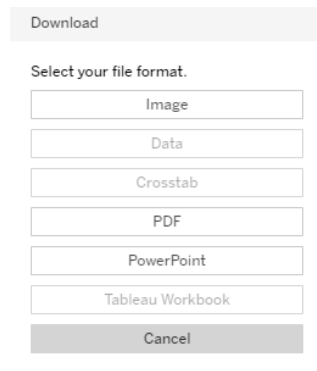
KYSTATS follows strict redaction and suppression guidelines to ensure the privacy of all individuals. The following rules were applied to the PSFR report to redact or mask some of the data based on the small cell-size counts that could be used to identify individuals. In general, categories must have a base denominator of 10 to be present in the report. If two categories are exhaustive (ex: males and females) and either group has less than 10 students, both groups are redacted. All rules apply at the school, district and state level. All graphs include data already presented in the report unless otherwise noted. If these data are redacted in the report, they are also redacted in any accompanying charts and graphs.

APPENDIX C: PRINTING

Printing - Download a dashboard to PDF



1. Click Download
2. On the Download screen – click PDF



Download

Select your file format.

Image

Data

Crosstab

PDF

PowerPoint

Tableau Workbook

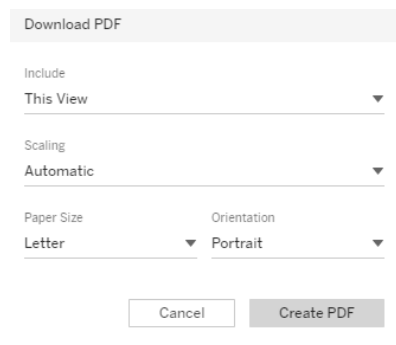
Cancel

3. On the Download PDF screen. Set what you want to include, the scaling paper size, and orientation, **then click create PDF.**

This View under Include, prints the current page.

Specific sheets from this dashboard (the displayed page) allows you to select specific sheets

Specific sheets from this workbook (select from all dashboards) allows you to select specific workbooks.



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Include
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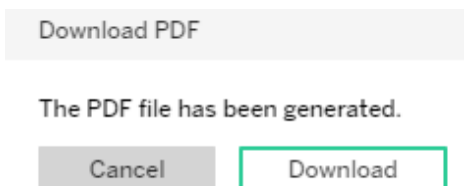
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Paper Size
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4. Once your PDF has been generated. Click **Download.**



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APPENDIX D: CLASSIFICATION OF ACADEMIC MAJORS INTO MAJOR GROUPS

Major Group	2-Digit CIP Code	2-Digit CIP Family Title
Arts & Humanities	05	Area, Ethnic, Cultural, Gender, & Group Studies
	16	Foreign Languages, Literatures, & Linguistics
	23	English Language & Literature/Letters
	24	Liberal Arts & Sciences, General Studies & Humanities
	30	Multi/Interdisciplinary Studies
	38	Philosophy & Religious Studies
	39	Theology & Religious Vocations
	50	Visual & Performing Arts
Business & Communication	54	History
	09	Communication, Journalism, & Related Programs
	10	Communications Technologies/Technicians & Support Services
Education	52	Business, Management, Marketing, & Related Support Services
	13	Education
Health	51	Health Professions & Related Programs
Social & Behavioral Sciences & Human Services	19	Family & Consumer Sciences/Human Sciences
	22	Legal Professions & Studies
	25	Library Science
	31	Parks, Recreation, Leisure, & Fitness Studies
	42	Psychology
	44	Public Administration & Social Service Professions
	45	Social Sciences
STEM	01	Agriculture, Agriculture Operations, & Related Sciences
	03	Natural Resources & Conservation
	04	Architecture & Related Services
	11	Computer & Information Sciences & Support Services
	14	Engineering
	15	Engineering Technologies & Engineering-related Fields
	26	Biological & Biomedical Sciences
	27	Mathematics & Statistics
	28	Military Science, Leadership & Operational Art
	40	Physical Sciences
Trades	41	Science Technologies/Technicians
	12	Personal & Culinary Services
	33	Citizenship Activities
	43	Homeland Security, Law Enforcement, Firefighting & Related Protective Services
	46	Construction Trades
	47	Mechanic & Repair Technologies/Technicians
	48	Precision Production
	49	Transportation & Materials Moving

APPENDIX E: CALCULATION OF WAGES

Academic Year	FFY for 3 year Post- Graduation Employment Outcomes	FFY for 5 year Post- Graduation Employment Outcomes	FFY for 10 year Post- Graduation Employment Outcomes
2007	2010	2012	2017
2008	2011	2013	2018
2009	2012	2014	-
2010	2013	2015	-
2011	2014	2016	-
2012	2015	2017	-
2013	2016	2018	-
2014	2017	-	-
2015	2018		